

Lesson 2: Exploring Wheat

Grade Level: 2nd Grade

Time: 60 minutes

Subjects: ELA, Science

Overview: This lesson is Lesson 2 of 5 in the *Celebrate Wheat* unit within the Growing Readers micro-curriculum, based on a series of books written by Kansas author Dan Yunk. Lesson 2 serves as a hands-on literacy and science lesson focused on planting wheat to deepen students' understanding of how wheat begins as a seed and grows into a food source. Students build understanding by applying background knowledge from the shared reading in Lesson 1 while engaging in structured discussions and a real-world planting experience connected to agriculture in Kansas. Second graders are expected to write a structured informative paragraph with a topic sentence, facts supported by definitions, and a concluding statement. This lesson also provides explicit instruction in long and short vowels, vowel teams, including the 'ea' pattern in *wheat*, and spelling patterns, including the doubling rule and the e-drop rule, all applied directly to the lesson's agricultural vocabulary. Connections to *The Soil Neighborhood* are woven throughout as students physically experience what they learned about soil's role in plant growth.

Skillset: Activating and connecting prior knowledge across units, wheat growth and seed observation, oral language and vocabulary development, descriptive language, long and short vowel distinction, informative writing with topic/facts/definitions/conclusion, geographic name capitalization, and Kansas connections through wheat and agricultural knowledge.

Kansas Academic Standards

Kansas ELA Standards

RF.2.3.a Distinguish long and short vowels when reading regularly spelled one-syllable words.

W.2.2 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

W.2.11 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

W.2.11.a Capitalize holidays, product names, and geographic names.

Science Standards

2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

National Agriculture Literacy Outcomes

Plants and Animals for Food, Fiber, and Energy

T2.K-2.a Describe how plants are grown and used for food.

T2.K-2.e Identify the importance of natural resources (e.g., sun, soil, water) in farming.

T3.K-2.b Recognize that agriculture provides our most basic necessities: food, fiber, energy, and shelter.

Objectives

Science Objectives

Students will be able to:

- Identify that wheat begins as a seed and grows into a plant.
- Plan and conduct an observation investigation to determine what plants need to grow (sunlight, water, soil).
- Explain that wheat is a plant grown by farmers to make food.
- Connect the role of healthy soil to wheat growth, drawing on prior knowledge from *The Soil Neighborhood*.
- Collect observational evidence that young wheat plants grow from seeds.

English Language Arts Objectives

Students will be able to:

- Distinguish long and short vowels in one-syllable words from the lesson vocabulary.
- Write an informative paragraph that introduces a topic, uses facts and definitions to develop points, and provides a concluding statement.
- Capitalize geographic names, including Kansas.

Materials Needed

- Wheat seeds (one per student, plus extras)
- 9oz clear plastic cups (one per student)
- Soil wafers (one per student)
- Water
- Trays or newspapers to protect surfaces
- Chart paper
- Markers
- Student drawing and writing paper
- Pencils or crayons
- Hand wipes or paper towels

Lesson Procedures

1. Activating Prior Knowledge
 - a. Explain to students: *"In our story, Celebrate Wheat, Kailey's grandma told her where pizza crust comes from. Today, we are not rereading the book, but we are going to use what we already know to do something farmers do — plant wheat. Before we start, let's think about what we already learned."*
 - b. Ask students:
 - *"What does wheat start as?"*
 - *"What does wheat need to grow?"*
 - *"What food do we eat that comes from wheat?"*
 - c. Briefly restate key ideas from Lesson 1: *"Wheat starts as a seed. It grows with sun, water, and soil. Farmers grow wheat to make flour, and flour is used to make foods like pizza crust."*
 - d. Bridge to *The Soil Neighborhood*: *"We also learned something important in The Soil Neighborhood — soil is not just dirt. It is a neighborhood full of helpers that*

give plants the nutrients they need to grow. Today, your wheat seed is going to go into that same kind of healthy Kansas soil.

2. Wheat Seed Exploration (Before Planting)

- a. Give each student one wheat seed to examine.
- b. Explain to students: *"Before we plant our wheat seed, we are going to look at it closely and make observations. Scientists record careful observations before they write, just like we are going to do today."*
- c. Prompt students to observe using their senses:
 - *"What does the seed look like?"*
 - *"Is it big or small?"*
 - *"Is it smooth or rough?"*
 - *"What color is it?"*
- d. Model descriptive language as students respond. Record student words on chart paper.
- e. Connect observation to prior knowledge: *"In the story, Grandma told Kailey that wheat starts as a seed. This small seed can grow into a tall wheat plant that will eventually produce more seeds. The soil neighborhood is going to take care of this seed once we plant it."*
- f. Explain to students: *"We look closely so we can use precise, specific words when we write about what we observe."*

3. Wheat Planting Activity (Hands-On Investigation)

Prepare materials so each student has their own planting container, soil, and wheat seed before beginning this step.

- a. Teacher models expectations before distributing materials:
 - *"Each of you will plant your own wheat seed."*
 - *"We handle seeds gently."*
 - *"We do not put seeds in our mouths."*
 - *"We keep soil in our own container."*
 - *"We listen and follow directions one step at a time."*
- b. Explain to students: *"In the story, Grandma told Kailey that wheat starts as a seed. Today, you are each going to plant your own wheat seed, just like farmers across Kansas do every year."*
- c. Distribute materials to each student, then model planting wheat step-by-step while students watch before they begin:
 - *"First, put the soil in your cup."*
 - *"Next, place your wheat seed in the soil."*
 - *"Then, cover the seed with soil."*
 - *"Last, add water to the soil."*
- d. Students plant their own wheat seeds following each modeled step. Pause between steps to ensure all students are successful before moving on.
- e. Explain to students: *"Planting your own seed helps you understand what we learned in the story. Each of your seeds can grow into wheat, just like Grandma described. Now that your seed is resting in the soil, it has everything it needs to begin growing — water, warmth, and the support of the soil neighborhood we learned about. Over the next few days, we are going to watch what happens and record our observations."*

4. Vocabulary & Oral Language Development

- a. Introduce and reinforce vocabulary:
 - **Wheat** – a plant Kansas farmers grow for food

- **Seed** – the part of the plant that grows into a new plant
 - **Soil** – the living ground that holds nutrients and helps plants grow
 - **Plant (verb)** – to put a seed in soil so it can grow
 - **Grow** – to get bigger over time
- b. Ask students:
- *“What did we plant the seed in?”*
 - *“What do plants need to grow?”*
 - *“Why do Kansas farmers plant wheat?”*
- Encourage students to answer in complete sentences using past tense verbs where appropriate (e.g., “We planted the seed in soil.”).
5. Phonics — Long & Short Vowels
- a. Explain to students: *“Today, we are going to look closely at the vowels in some of our lesson words. Every syllable has a vowel. Vowels can make a short sound or a long sound. A short vowel says its sound, like the short /e/ in bed. A long vowel says its name, like the long /e/ in seed.”*
- b. Write these words on chart paper and work through them with students:
- *plant* — “Say the word plant. The vowel is a. Say it: /pl-a-nt/. Is that a long or short /a/? It is short — it says its sound, not its name. Compare: pl-A-ne (long a says its name). Plant has a short a.”
 - *seed* — “Say the word seed. The vowels are e-e, and they make the long /e/ sound — the vowel says its name. Compare: bed (short e says its sound, not its name). Seed has a long e.”
 - *soil* — “Say the word soil. The letters ‘o-i’ work together as a vowel team, making the /oi/ sound. This is neither long nor short — it is a special vowel team sound.”
 - *grow* — “Say the word grow. The vowel you hear is long /o/ — it says its name. Compare: got (short o says its sound). Grow has a long o.”
- c. Ask students: *“What other words can you think of that have a long vowel sound?”*
- d. Write student answers on chart paper.
6. Geographic Names & Capitalization
- a. Explain to students: *“In second grade, we capitalize geographic names — names of specific places like states, cities, and countries. Kansas is a geographic name, so we always capitalize it. Let’s look at our sentences and find the geographic names.”*
- b. Write on chart paper:
- *“Farmers in Kansas grow wheat.”* — Kansas is a geographic name; always capitalize it.
 - *“Kansas wheat is used to make flour.”* — the same rule applies.
- c. Ask students: *“If we were writing about wheat farmers in a different state, like Oklahoma, would we capitalize Oklahoma? Why?”*
7. Shared Writing — Informative Paragraph
- Explain to students: *“Scientists and writers record what they observe and know. Today, we are going to write an informative paragraph about wheat. In second grade, a strong informative paragraph introduces the topic, uses facts and definitions to develop points, and ends with a concluding statement.”*
- a. On chart paper, write and model the paragraph:
- “Wheat is a plant that Kansas farmers grow for food. A seed is the part of a plant that grows into a new plant. Farmers plant wheat seeds in soil, and the seeds*

need water and sunlight to grow. Kansas grows more wheat than almost any other state in the United States. Wheat is an important crop that helps feed people around the world."

- b. Point to and name each part:
 - *Topic sentence: "Wheat is a plant that Kansas farmers grow for food."*
 - *Fact with definition: "A seed is the part of a plant that grows into a new plant."*
 - *Fact: "Farmers plant wheat seeds in soil, and the seeds need water and sunlight to grow."*
 - *Geographic name capitalization: Kansas*
 - *Concluding statement: "Wheat is an important crop that helps feed people around the world."*
 - c. Ask students:
 - *"What is the topic of this paragraph?"*
 - *"Which sentence gives us a definition? What word is being defined?"*
 - *"Which sentence is the concluding statement? How do you know?"*
 - *"Can you find a geographic name? Is it capitalized?"*
8. Student Writing Component
- Gather students in a place where they can clearly see the model paragraph and chart paper before beginning.
- a. Explain to students: *"Now it is your turn. You are going to write your own informative paragraph about wheat. Remember the three parts: introduce the topic, use facts and definitions to develop your points, and end with a concluding statement."*
 - b. Students complete a draw-and-write response. Students draw the wheat seed they planted, then independently write their own informative paragraph. The expectation is independent writing, students introduce the topic, supply at least two facts (one may include a definition), and write a concluding statement.
 - c. As students write, circulate and explicitly support:
 - *Topic sentence that introduces wheat*
 - *At least one fact that includes a definition*
 - *Correct capitalization of Kansas and geographic names*
 - *Concluding statement*

Differentiation note: For students who need additional support, provide a paragraph frame with labeled blanks at teacher discretion (e.g., " is a plant that . A is . Farmers . Kansas "). For students ready for a challenge, prompt them to include a second fact with a definition, or to use a comparison in their concluding statement (e.g., "Wheat is one of Kansas's most important crops because it feeds people not just in Kansas, but all over the world.").
9. Discussion & Reflection
- a. Ask students:
 - *"What did we do today that helped us understand the text better?"*
 - *"Why do Kansas farmers plant wheat?"*
 - *"How is our planting cup like the soil neighborhood we learned about? What helpers are in that soil right now?"*
 - *"What do you think will happen to our seeds over the next few days?"*
10. Kansas Connection

- a. Explain to students: *"We live in Kansas, and Kansas is a farming state. Kansas is a geographic name; remember to capitalize it whenever you write it. Some farmers in Kansas grow wheat to help feed the world. Wheat is one of the crops Kansas is best known for."*
- b. Show a simple map of Kansas and point to where the school is located.
- c. Explain to students: *"Right here is where we live. All around our community, farmers grow crops like wheat in big fields."*
- d. Kansas Connection:
Kansas Connection — Teacher Script: *"Today, every one of you planted a wheat seed, and that is something farmers across Kansas do every single year. Wheat farming looks a little different depending on where you are. If you live out in the country or your family has land, you might have watched a farmer get a field ready, or seen rows of little green sprouts coming up in the spring. If you live closer to town, you might not have planted a seed before today, but now you have. And whether your family farms or not, that seed in your cup is doing the same thing that millions of seeds across Kansas are doing right now, putting down roots in the soil, reaching for the sun, and slowly becoming the food that shows up on all of our tables."*
- e. Ask students:
 - *"Have you seen wheat growing near your home or on a drive through Kansas?"*
 - *"Who do you know that works on a farm or ranch?"*
 - *"How does planting your own wheat seed help you understand what Kansas farmers do?"*

Supplemental Activities: Wheat Journal — 2nd Grade Edition: Give each student a writing booklet to serve as a wheat journal. On the first page, students write the date (capitalizing the month as a proper noun), draw their planted seed, and write an informative paragraph using the W.2.2 structure: topic sentence, at least two facts, and a concluding statement. As the wheat grows over the coming days and weeks, students add a new entry each time they observe a change, writing in complete sentences, using past-tense verbs where appropriate (e.g., "The seed grew a small root."). Prompt students to apply the ea vowel team as they write observation words like *leaf*, *wheat*, *heat*. Journals can be revisited in later lessons and brought home at the end of the unit as a take-home artifact connecting school learning to family conversations about Kansas agriculture.

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